Chapter 6

Creating Watershed Elements

Table of Contents

Section **Page**

6 Creating Watershed Elements
6.1 Creating a Reservoir 6-1
6.1.1 Editing Reservoir Data (Watershed Setup) 6-2
6.1.2 Renaming a Reservoir 6-3
6.1.3 Removing a Reservoir from a Configuration 6-4
6.1.4 Deleting a Reservoir 6-4
6.1.5 Adding Configuration Notes for a Reservoir 6-4
6.2 Creating a Levee 6-5
6.2.1 Editing Levee Data 6-5
6.2.2 Renaming a Levee 6-7
6.2.3 Removing a Levee from a Configuration 6-7
6.2.4 Deleting a Levee 6-8
6.2.5 Adding Configuration Notes for a Levee 6-8
6.3 Creating a Diversion 6-9
6.3.1 Editing Diversion Data 6-10
6.3.2 Renaming a Diversion 6-10
6.3.3 Disconnecting a Diversion 6-11
6.3.4 Removing a Diversion from a Configuration 6-11
6.3.5 Deleting a Diversion 6-11
6.3.6 Adding Configuration Notes for a Diversion 6-12
6.4 Creating Channel Modifications 6-12
6.4.1 Editing Channel Modification Data 6-13
6.4.2 Renaming a Channel Modification 6-13
6.4.3 Removing a Channel Modification from a Configuration 6-14
6.4.4 Deleting a Channel Modification 6-14
6.4.5 Adding Configuration Notes for Channel Modifications 6-14
6.5 Creating Off-Channel Storage Areas 6-15
6.5.1 Editing Off-Channel Storage Data 6-15
6.5.2 Renaming an Off-Channel Storage Area 6-16
6.5.3 Removing an Off-Channel Storage Area from a Configuration 6-16
6.5.4 Deleting an Off-Channel Storage Area 6-17
6.5.5 Adding Configuration Notes for an Off-Channel Storage Area 6-17

Section (continued) **Page**

6.6 Creating "Other" Projects 6-18
6.6.1 Editing "Other" Project Data 6-18
6.6.2 Renaming "Other" Projects 6-19
6.6.3 Removing "Other" Projects from a Configuration 6-19
6.6.4 Deleting "Other" Projects 6-20
6.6.5 Adding Configuration Notes for "Other" Projects 6-20
6.7 Configuring Project Display Properties 6-20
6.8 Defining Computation Points 6-21
6.8.1 Editing Computation Point Data 6-21
6.8.2 Renaming a Computation Point and Editing the Description 6-23
6.8.3 Deleting a Computation Point 6-23
6.9 Working with Time-Series Icons 6-24

List of Figures

Figure Number

6.1 Reservoir Elements in Watershed Setup Module 6-1
6.2 Name New Reservoir Dialog Box 6-2
6.3 Reservoir Editor 6-3
6.4 Warning Message when Renaming Reservoir 6-3
6.5 Confirm Removal of Reservoir Dialog Box 6-4
6.6 Configuration Notes - Reservoir 6-4
6.7 Levee Drawing 6-5
6.8 Levee Properties Editor 6-6
6.9 Warning Message when Renaming Levee 6-7
6.10 Confirm Removal of Levee Dialog Box 6-7
6.11 Configuration Notes - Levee 6-8
6.12 Example Diversions 6-9
6.13 Diversion Editor 6-10
6.14 Warning Message when Renaming Diversion 6-10
6.15 Disconnecting an Outflow - Diversion Shortcut Menu 6-11
6.16 Configuration Notes - Diversion 6-12
6.17 Channel Modification Editor 6-13
6.18 Warning Message when Renaming Channel Modification 6-13
6.19 Configuration Notes - Channel Modification 6-14
6.20 Off-Channel Storage Editor 6-15
6.21 Warning Message when Renaming Off-Channel Storage Area 6-16
6.22 Configuration Notes - Off-Channel Storage 6-17
6.23 "Other" Projects Editor 6-18
6.24 Warning Message when Renaming "Other" Project 6-19
6.25 Configuration Notes - "Other" Projects 6-20
6.26 Computation Point Editor 6-21
6.27 Rename Dialog Box - Computation Point 6-23
6.28 Confirm Deletion Dialog Box - Computation Point 6-23
6.29 Time-Series Icons 6-24

Chapter 6

Creating Watershed Elements

In the **Watershed Setup Module** you can define the Projects and Computation Points used in ResSim.

ResSim provides the tools for drawing geographically referenced Projects including Reservoirs, Levees, Diversions, Channel Modifications, Off-Channel Storage Areas, and "Other" Projects. The tools provide the ability to edit the graphical representation of the Project within the map display panel, and they also provide access to menu items for editing the Project data directly from the map display. ResSim computations include only reservoir and diversion projects.

When you add a Project to the map display panel, it becomes part of the Configuration you currently have selected. A "superset" of all configurations is named "Study" and includes all of the Projects for the watershed. For more information on associating projects with Configurations, refer to Chapter 7.

The Computation Point set contains all locations where time-series information is to be computed for possible exchange between application models (e.g., ResSim and FIA). ResSim automatically generates Computation Points when Projects are placed on the Stream Alignment.

6.1 Creating a Reservoir

You will create a reservoir by starting at the *upstream* end of the reservoir. After the reservoir has been created, several visual elements will appear (as shown in Figure 6.1) that represent a reservoir: a storage reach (dark cyan), a "pool" (light cyan triangle), a "dam" (small gray rectangle), and computation points (black dots) at the upstream and downstream locations of the reservoir on the stream alignment.

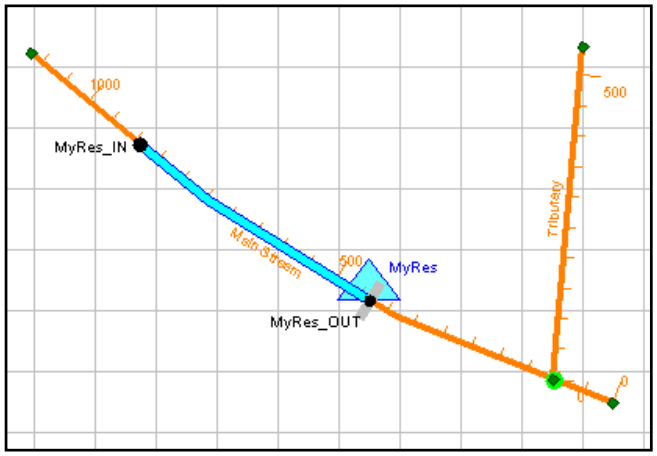

Figure 6.1 Reservoir Elements in Watershed Setup Module

To add a reservoir to the watershed:

1. Select the **Reservoir Tool**  .
2. While holding down the **CTRL** key, click on the stream alignment at the *upstream* location of the reservoir. If more than one stream flows into the reservoir pool, continue holding down the **CTRL** key and click at each location of inflow into the reservoir on these streams.
3. Release the **CTRL** key and click on the stream alignment at the *downstream* location of the reservoir (where the dam is located). Reservoirs should not overlap previously placed computation points.
4. When you release the mouse button after creating the downstream end of the reservoir, the **Name New Reservoir** dialog box appears (Figure 6.2).

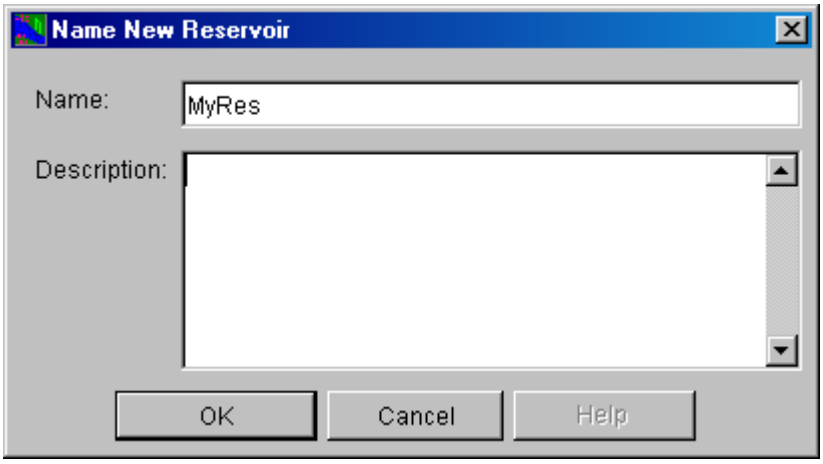

Figure 6.2 Name New Reservoir Dialog Box

5. You name the Reservoir by typing a name in the **Name** field. Optionally, you can enter a **Description** for the Reservoir.
6. Click **OK** when you are done.

The new Reservoir will now appear in your map display.

6.1.1 Editing Reservoir Data (Watershed Setup)

To edit data for the Reservoir in the Watershed Setup Module, select the **Reservoir Tool**  and right-click on the Reservoir. From the shortcut menu, select **Edit Reservoir** to access the **Reservoir Editor** (Figure 6.3).

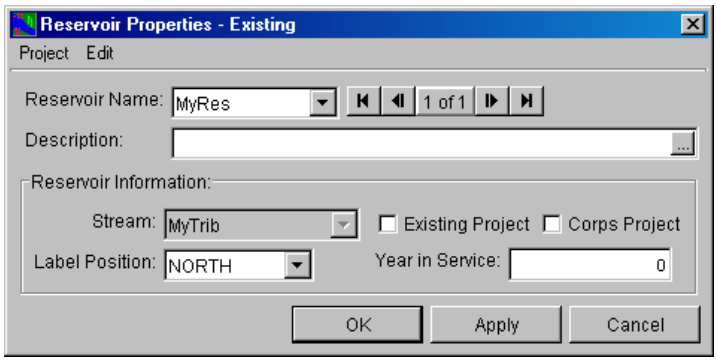

Figure 6.3 Reservoir Editor

In the Watershed Setup Module, the only data that you need to specify for the Reservoir is its **Name** and **Label Position** (additional data is entered in the Reservoir Network Module). The **Label Position** selects where to place the reservoir name in the display area, relative to the reservoir.

Check **Existing Project** if the reservoir currently exists so that the reservoir will be added automatically to any new configurations. You can remove it at any time by selecting **Remove from Configuration** in the shortcut menu or by using the **Configuration Editor**. This is a useful option if you are creating multiple configurations that use the same set of reservoirs.

Certain models compute project benefits (e.g., HEC-FIA); therefore, use the **Corps Projects** checkbox to indicate if the reservoir is a Corps Project.

The **Year in Service** field is optional and is used in planning studies. You do not need to specify a year in service when defining projects for real-time studies.

6.1.2 Renaming a Reservoir

To rename a Reservoir, select the **Reservoir Tool**  and right-click on the Reservoir. From the shortcut menu, select **Rename Reservoir**. This command opens a dialog box that allows you to rename the reservoir. A warning message (Figure 6.4) appears when you save the new name, asking you to confirm that you want to rename the reservoir. If you choose to rename the reservoir, remember that changing a reservoir name may affect one or more of the configurations that recognize the reservoir.

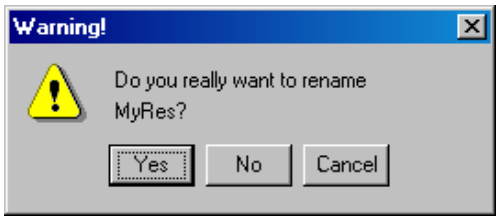

Figure 6.4 Warning Message when Renaming Reservoir

6.1.3 Removing a Reservoir from a Configuration

To remove a Reservoir from the current Configuration, select the **Reservoir Tool** and right-click on the Reservoir. From the shortcut menu, select **Remove from Configuration**. This command removes the reservoir from the Configuration that is currently displayed in the **Configuration** box on the toolbar. The **Confirm Removal** dialog box appears (Figure 6.5).

Figure 6.5 Confirm Removal of Reservoir Dialog Box

You can also remove a Reservoir from a Configuration by accessing the **Configuration Editor** and manually removing the reservoir from the Projects tab using the **Project Selector**.

6.1.4 Deleting a Reservoir

To delete a Reservoir from the watershed, select the **Reservoir Tool** and right-click on the Reservoir. From the shortcut menu, select **Delete Reservoir**. This command removes the reservoir and all data associated with the reservoir from the watershed. You are asked to confirm a deletion before the reservoir is removed, and asked if you would like to delete the reservoir's computation points. If you choose to delete the reservoir, remember that deleting the reservoir may affect one or more of the configurations that recognize the reservoir.

6.1.5 Adding Configuration Notes for a Reservoir

To add Configuration Notes for a Reservoir, select the **Reservoir Tool** and right-click on the Reservoir. From the shortcut menu, select **Configuration Notes**. This command opens a dialog box (Figure 6.6) for entering text information about a project specific to the configuration.

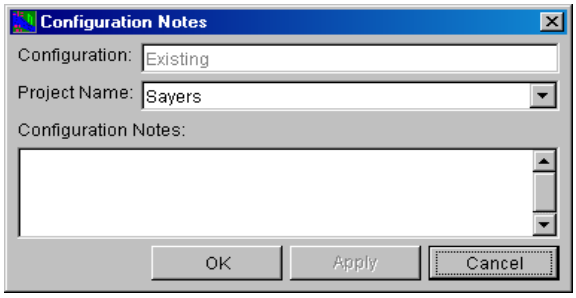

Figure 6.6 Configuration Notes - Reservoir

6.2 Creating a Levee

A levee is an earthen barrier built along a stream to provide protection from flooding. A levee can reduce flood damage by preventing flood stages from reaching a potential damage area.

To add a levee to the watershed:

1. Select the **Levee Tool**  .
2. While holding down the **CTRL** key, click on the stream alignment to select the *upstream* end of the levee, then release the **CTRL** key and click to select the *downstream* end.

When you release the mouse button after clicking at the downstream end of the levee, a dialog box appears for you to provide a name and description. After entering a Levee name, the levee will be drawn as a black line following the stream alignment. However, using the Levee Editor (see Follows Stream option in Section 6.2.1), you can allow for positioning the levee along the side of the stream alignment in the display area (Figure 6.7).

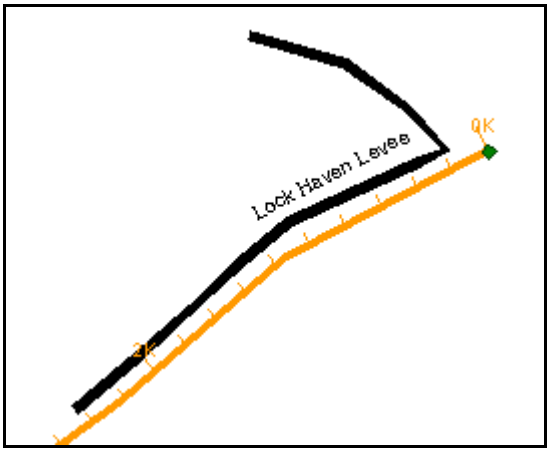

Figure 6.7 Levee Drawing

6.2.1 Editing Levee Data

To edit Levee data, right-click on the levee and select **Edit Levee**. The **Levee Properties Editor** opens, as shown in Figure 6.8.

In addition to the **Levee Name** and **Description**, the Levee Editor displays the **Stream Name** and the **Start** and **End Stations** for the levee. You can edit the stationing manually by directly entering values in the **Start Station** and **End Station** fields.

The **Follows Stream** checkbox is selected by default. With this option selected, the levee is drawn in parallel to the stream alignment. By deselecting the **Follows Stream** checkbox, you can allow for

moving the levee and editing its shape using the **Levee Tool**  in the map display. To do this, first double-click the levee to select it. The levee will turn yellow and the beginning and end points will appear as black dots. To add additional vertex points, **CTRL**-click along the levee. You can then drag any of the vertex points to the desired location. This process is very similar to editing the stream alignment, with the exception of the mouse tool used.

Certain models compute project benefits (e.g., HEC-FIA); therefore, use the **Corps Projects** checkbox to indicate if the levee is a Corps Project.

ResSim does not actually use levees in its computations. However, those models that do use levee data in their computations contain the tools for configuring the levee data. Therefore, refer to the appropriate model's User's Manual (e.g., HEC-FIA) for further information.

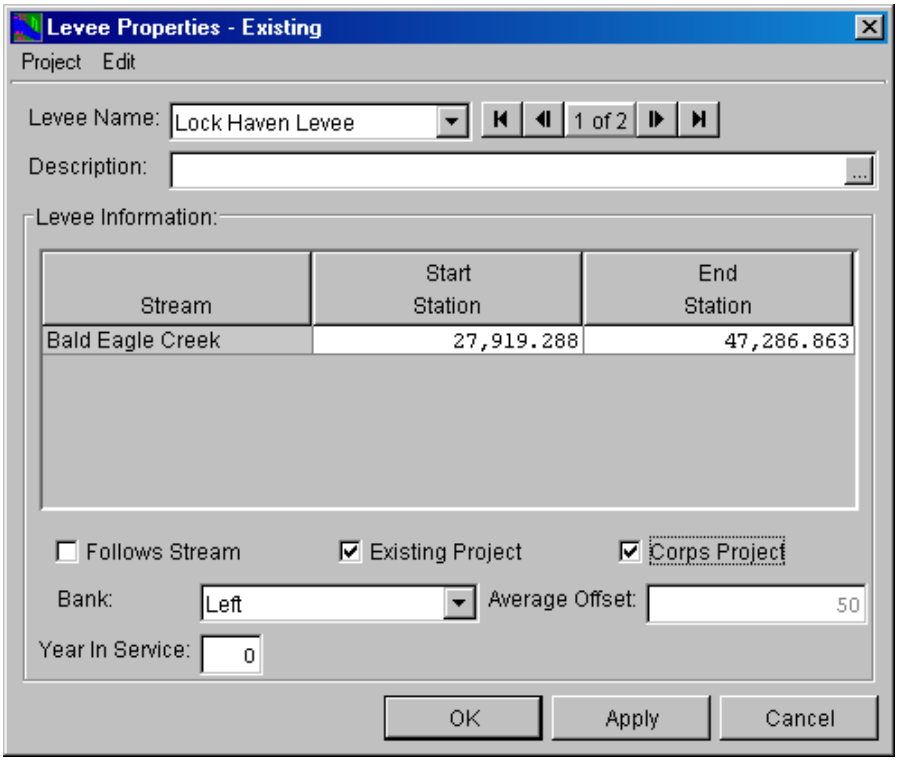

Figure 6.8 Levee Properties Editor

6.2.2 Renaming a Levee

To rename a Levee:

1. Select the **Levee Tool** and right-click on the Levee.
2. From the shortcut menu, select **Rename Levee**. This command opens a dialog box that allows you to rename the levee.
3. If you choose to rename the levee, remember that changing the levee name may affect one or more of the configurations that recognize the levee.
4. A warning message appears (Figure 6.9) when you save the new name, asking you to confirm that you want to rename the levee.

Figure 6.9 Warning Message when Renaming Levee

6.2.3 Removing a Levee from a Configuration

To remove a Levee from the current Configuration:

1. Select the **Levee Tool**
2. Right-click on the Levee.
3. From the shortcut menu, select **Remove from Configuration**. This command removes the levee from the Configuration that is currently displayed in the **Configuration** box on the toolbar. The **Confirm Removal** dialog box appears (Figure 6.10).

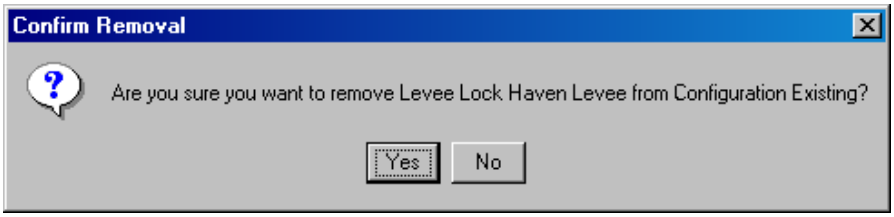

Figure 6.10 Confirm Removal of Levee Dialog Box

You can also remove a Levee from a Configuration by accessing the **Configuration Editor** and manually removing the levee from the **Projects** tab using the **Project Selector**.

6.2.4 Deleting a Levee

To delete a Levee from the watershed:

1. Select the **Levee Tool** .
2. Right-click on the Levee.
3. From the shortcut menu, select **Delete Levee**. This command removes the levee and all data associated with the levee from the watershed. You are asked to confirm a deletion before the levee is removed. Again, if you choose to delete the levee, remember that deleting the levee may affect one or more of the configurations that recognize the levee.

6.2.5 Adding Configuration Notes for a Levee

To add Configuration Notes for a Levee:

1. Select the **Levee Tool** and right-click on the Levee.
2. From the shortcut menu, select **Configuration Notes**. This command opens a dialog box (Figure 6.11) for entering text information about a project that is specific to the configuration.

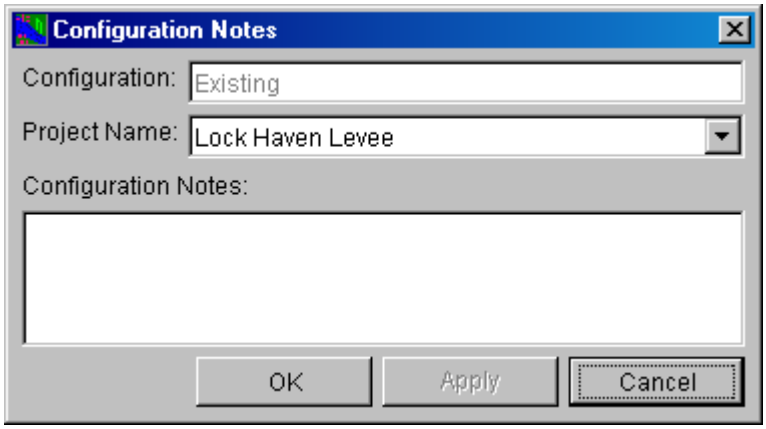

Figure 6.11 Configuration Notes - Levee

6.3 Creating a Diversion

To add a Diversion to the watershed:

1. Select the **Diversion Tool**  .
2. While holding down the **CTRL** key, click to select the location on the stream alignment where the diversion will occur (the "from" location). Then, release the **CTRL** key and click to select the location where the diverted water will go (the "to" location). The "to" location (location that will receive the diverted water) can be on the stream alignment (which indicates that the diverted water will remain within the channel system) or it can be a point in the display area that is not connected to the stream alignment (which will indicate a loss of the diverted water to the channel system).
3. When you release the mouse button after creating the diversion, a dialog box appears for you to provide a name and description. After entering a name, the Diversion is drawn in the display area. If both ends of the diversion are connected to the stream alignment, then Computation Points are automatically generated at each end of the diversion (the color of the arrow head will be blue). If the diversion is only connected to the stream alignment at the location where the water is diverted from, then a Computation Point will be generated at that location only (and the color of the arrow head will be black).
4. It's a good idea to rename the Computation Points that are automatically generated for a diversion. To do this, select the **Computation Point Tool**  and right-click on the computation points at the ends of the diversion. Then, from the shortcut menu, select **Rename Computation Point**. Figure 6.12 shows example diversions where the Computation Points for the diversions were renamed ("PutDiv", "GetDiv", and "DivOut").

After the diversion is defined, it will show up as a black line with an arrow head at the divert-to end. If the diversion leaves one location and returns to another location (see "MyDiv" diversion in Figure 6.12), the arrow head is blue. If the diversion leaves the system (see "YourDiv" diversion in Figure 6.12), then the arrow head is displayed in black instead of blue.

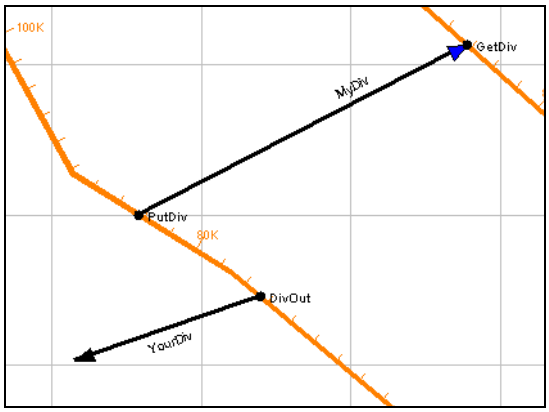

Figure 6.12 Example Diversions

6.3.1 Editing Diversion Data

To edit Diversion Data:

1. Select the **Diversion Tool**  .
2. Right-click on the Diversion and select **Edit Diversion**. The **Diversion Editor** opens, as shown in Figure 6.13.

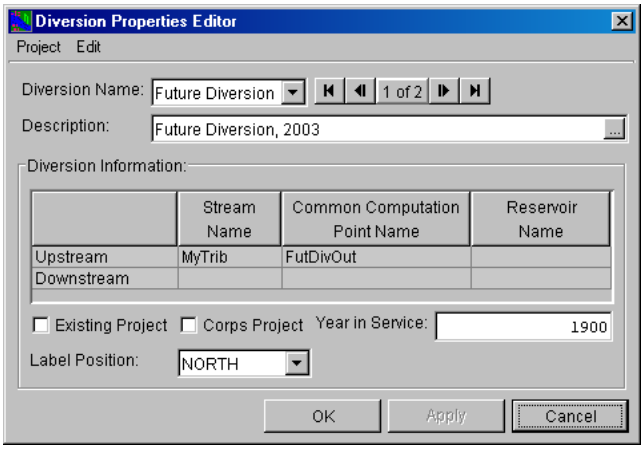

Figure 6.13 Diversion Editor

The Diversion Editor is similar to the Reservoir Editor described in Section 6.1.1. You can specify whether the diversion is an **Existing Project**, a **Corps Project**, the **Label Position**, and the **Year In Service** (as previously described in Section 6.1.1). The **Stream** the diversion connects to is shown.

6.3.2 Renaming a Diversion

To rename a Diversion

1. Select the **Diversion Tool**  .
2. Right-click on the Diversion and from the shortcut menu select **Rename Diversion**. This command opens a dialog box that allows you to rename the diversion. If you choose to rename the diversion, remember that changing the diversion name may affect one or more of the configurations that recognize the diversion.
3. A warning message (Figure 6.14) appears when you save the new name, asking you to confirm that you want to rename the diversion.

Figure 6.14 Warning Message when Renaming Diversion

6.3.3 Disconnecting a Diversion

If you decide to disconnect the outflow of a diversion:

1. Select the **Diversion Tool**  .
2. Right-click on a Diversion that is connected to another location and select **Disconnect Outflow** from the shortcut menu (Figure 6.15).

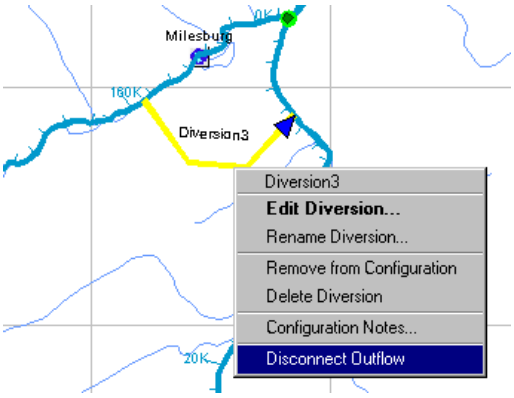

Figure 6.15 Disconnecting an Outflow - Diversion Shortcut Menu

6.3.4 Removing a Diversion from a Configuration

To remove a Diversion from the current Configuration:

1. Select the **Diversion Tool**  .
2. Right-click on the Diversion and from the shortcut menu select **Remove from Configuration**. This command removes the diversion from the Configuration that is currently displayed in the **Configuration** box on the toolbar. The **Confirm Removal** dialog box will appear.

You can also remove a Diversion from a Configuration by accessing the **Configuration Editor** and manually removing the diversion from the **Projects** tab using the **Project Selector**.

6.3.5 Deleting a Diversion

To delete a Diversion from the watershed:

1. Select the **Diversion Tool**  and right-click on a Diversion.
2. From the shortcut menu, select **Delete Diversion**. This command removes the diversion and all data associated with the diversion from the watershed. You are asked to confirm a deletion before the diversion is removed. Again, if you choose to delete the diversion, remember that deleting the diversion may affect one or more of the configurations that recognize the diversion.

6.3.6 Adding Configuration Notes for a Diversion

To add Configuration Notes for a Diversion:

1. Select the **Diversion Tool** and right-click on the Diversion.
2. From the shortcut menu, select **Configuration Notes**. This command opens a dialog box (Figure 6.16) for entering text information about a diversion that is specific to the configuration.

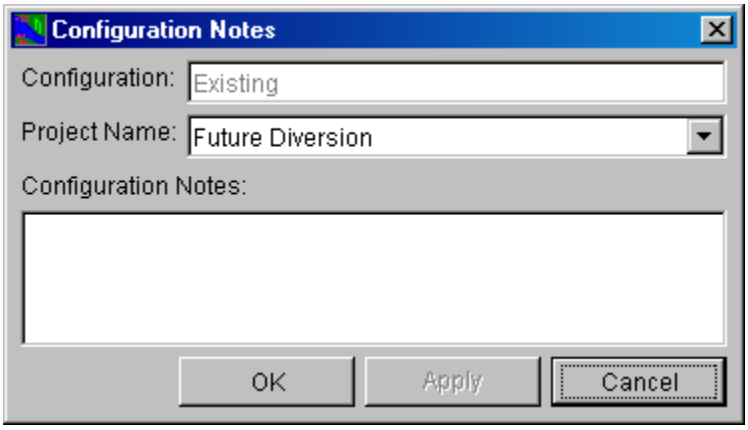

Figure 6.16 Configuration Notes - Diversion

6.4 Creating Channel Modifications

To add a Channel Modification to the watershed:

1. Select the **Channel Modification Tool** .
2. Hold down the **CTRL** key and click at the upstream end of the channel modification along the stream alignment.
3. Release the **CTRL** key and click on the downstream end of the channel modification.

When you release the mouse button after creating the downstream end, the channel modification is drawn along the stream alignment and a dialog box appears for you to provide a name and description. After entering a name, the channel modification is drawn along the stream alignment in the display area. Note that Channel Modifications are not yet implemented in ResSim's computations.

6.4.1 Editing Channel Modification Data

To edit Channel Modification Data:

1. Select the **Channel Modification Tool**  .
2. Right-click on the Channel Modification and select **Edit Channel Modification**. The **Channel Modification Editor** opens, as shown in Figure 6.17.

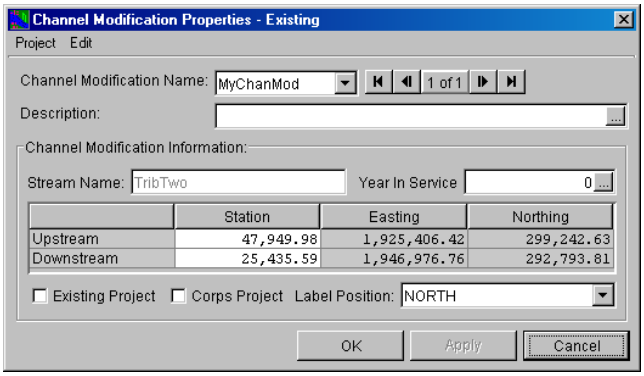

Figure 6.17 Channel Modification Editor

The Channel Modification Editor contains the basic configuration data for the Channel Modification Project, such as whether it is an **Existing Project**, a **Corps Project**, the **Label Position**, the **Stream Name**, and the **Year in Service** (as previously described in Section 6.1.1).

6.4.2 Renaming a Channel Modification

To rename a Channel Modification:

1. Select the **Channel Modification Tool**  and right-click on the Channel Modification.
2. From the shortcut menu, select **Rename Channel Modification**. This command opens a dialog box that allows you to rename the channel modification. If you choose to rename the channel modification, remember that changing the name may affect one or more of the configurations that recognize the channel modification.
3. A warning message (Figure 6.18) appears when you save the new name, asking you to confirm that you want to rename the channel modification.

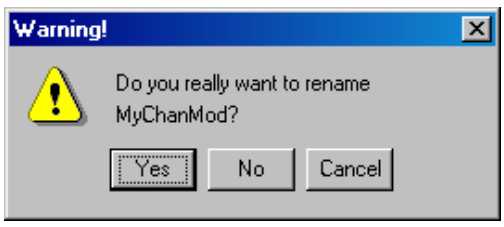

Figure 6.18 Warning Message when Renaming Channel Modification

6.4.3 Removing a Channel Modification from a Configuration

To remove a Channel Modification from the current Configuration:

1. Select the **Channel Modification Tool** and right-click on the Channel Modification.
2. From the shortcut menu, select **Remove from Configuration**. This command removes the Channel Modification from the Configuration that is currently displayed in the Configuration box on the toolbar. The Confirm Removal dialog box appears.

You can also remove a Channel Modification from a Configuration by accessing the **Configuration Editor** and manually removing the Channel Modification from the **Projects** tab using the **Project Selector**.

6.4.4 Deleting a Channel Modification

To delete a Channel Modification from the watershed:

1. Select the **Channel Modification Tool** and right-click on the Channel Modification.
2. From the shortcut menu, select **Delete Channel Modification**. This command removes the Channel Modification and all data associated with it from the watershed. You will be asked to confirm a deletion before the Channel Modification is removed. Again, if you choose to delete the Channel Modification, remember that deleting it may affect one or more of the configurations that recognize the project.

6.4.5 Adding Configuration Notes for Channel Modifications

To add Configuration Notes for a Channel Modification:

1. Select the **Channel Modification Tool** and right-click on the Channel Modification.
2. From the shortcut menu, select **Configuration Notes**. This command opens a dialog box (Figure 6.19) for entering text information about a project that is specific to the configuration.

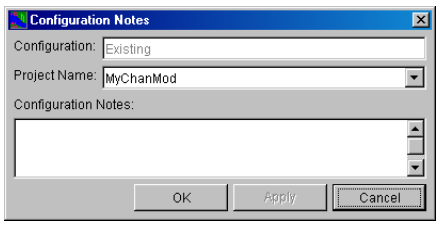

Figure 6.19 Configuration Notes - Channel Modification

6.5 Creating Off-Channel Storage Areas

To add an Off-Channel Storage Area to the watershed:

1. Select the **Off-Channel Storage Tool** .
2. Hold down the **CTRL** key and click the location in the map where you want to add the Storage Area. Continue to hold the **CTRL** key while you click to add additional vertex points for the bounding polygon that represents the Off-Channel Storage Area.
3. When you reach the end point, release the **CTRL** key and click to place the last point.
4. When you release the mouse button, a dialog box appears for you to provide a name and description. After entering a name, the polygon appears in the map display area. Note that Off-Channel Storage Areas are not yet implemented in ResSim's computations.

6.5.1 Editing Off-Channel Storage Data

To edit Off-Channel Storage data:

1. Select the **Off-Channel Storage Tool** and right-click on the Off-Channel Storage Area.
2. Select **Edit Off-Channel Storage**. The **Off-Channel Storage Editor** opens, as shown in Figure 6.20.

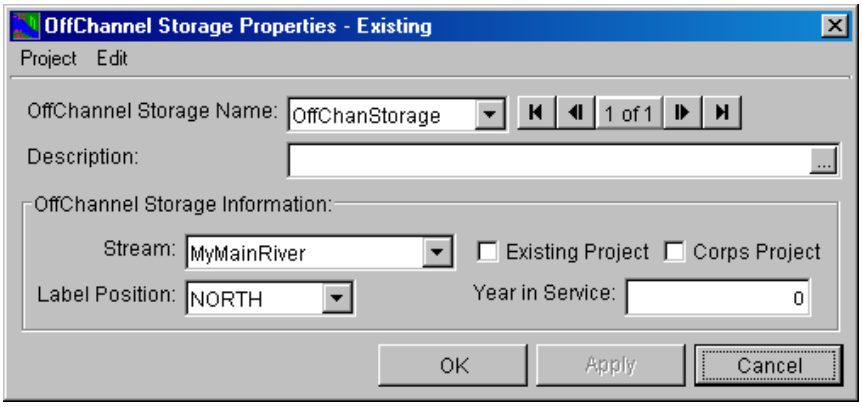

Figure 6.20 Off-Channel Storage Editor

The Off-Channel Storage Editor contains the basic configuration data for the Off-Channel Storage project, such as whether the project is an **Existing Project**, a **Corps Project**, the **Label Position**, the **Stream Name**, and the **Year in Service** (as previously described in Section 6.1.1).

6.5.2 Renaming an Off-Channel Storage Area

To rename an Off-Channel Storage Area:

1. Select the **Off-Channel Storage Tool** and right-click on the Off-Channel Storage Area.
2. From the shortcut menu, select **Rename Off-Channel Storage**. This command opens a dialog box that allows you to rename the Off-Channel Storage Area project. If you choose to rename the Off-Channel Storage Area project, remember that changing the name may affect one or more of the configurations that recognize the project.
3. A warning message (Figure 6.21) appears when you save the new name, asking you to confirm that you want to rename the Off-Channel Storage Area project.

Figure 6.21 Warning Message when Renaming Off-Channel Storage Area

6.5.3 Removing an Off-Channel Storage Area from a Configuration

To remove an Off-Channel Storage Area from the current Configuration:

1. Select the **Off-Channel Storage Tool** and right-click on the Off-Channel Storage Area.
2. From the shortcut menu, select **Remove from Configuration**. This command removes the Off-Channel Storage project from the Configuration that is currently displayed in the Configuration box on the toolbar. The Confirm Removal dialog box will appear.

You can also remove an Off-Channel Storage Area from a Configuration by accessing the **Configuration Editor** and manually removing the project from the **Projects** tab using the **Project Selector**.

6.5.4 Deleting an Off-Channel Storage Area

To delete an Off-Channel Storage Area from the watershed:

1. Select the **Off-Channel Storage Tool** and right-click on the Off-Channel Storage Area.
2. From the shortcut menu, select **Delete Off-Channel Storage**. This command removes the Off-Channel Storage Area project and all data associated with it from the watershed. You will be asked to confirm a deletion before the Off-Channel Storage Area project is removed. Again, if you choose to delete the project, remember that deleting it may affect one or more of the configurations that recognize the Off-Channel Storage Area project.

6.5.5 Adding Configuration Notes for an Off-Channel Storage Area

To add Configuration Notes for an Off-Channel Storage Area:

1. Select the **Off-Channel Storage Tool** and right-click on the Off-Channel Storage Area.
2. From the shortcut menu, select **Configuration Notes**. This command opens a dialog box for entering text information about an Off-Channel Storage Area project that is specific to the configuration (Figure 6.22).

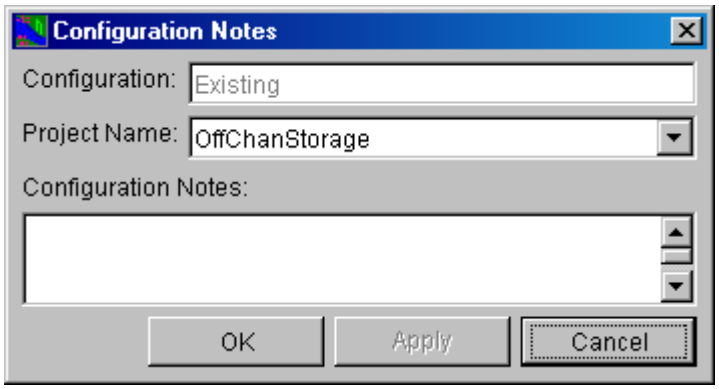

Figure 6.22 Configuration Notes - Off-Channel Storage

6.6 Creating "Other" Projects

To add "Other" Projects to the watershed:

1. Select the **Other Project Tool** .
2. Hold down the **CTRL** key and single click in the location where you want the other project to appear.

The Other Projects symbol will appear in the map display. Note that Other Projects are not yet implemented in ResSim's computations.

6.6.1 Editing "Other" Project Data

To edit "Other" Projects Data:

1. Select the **Other Project Tool** and right-click on the "Other" Project.
2. Select **Edit Other Project**. The **Other Project Properties** editor opens, as shown in Figure 6.23.

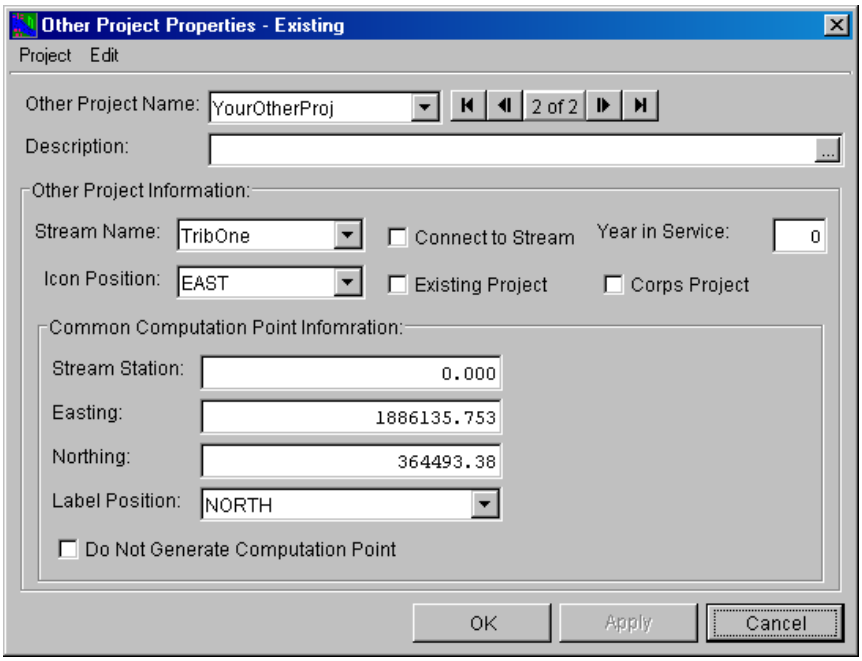

Figure 6.23 Other Project Properties Editor

The **Other Projects Properties** editor allows you to define the spatial location (Coordinates), and contains basic configuration data, such as whether the project is an **Existing Project**, a **Corps Project**, the **Label Position**, the **Stream Name**, and the **Year in Service** (as previously described in Section 6.1.1).

Two options are unique to the Other Project Editor:

1. **Connect to Stream** checkbox allows you to associate the project with a particular stream in case it might be used with a supplemental model.
2. **Do Not Generate Computation Point** checkbox determines whether or not ResSim will automatically generate a Computation Point at the location specified in the Coordinates box.

6.6.2 Renaming "Other" Projects

To rename an "Other" Project:

1. Select the **Other Project Tool** and right-click on the Other Project.
2. From the shortcut menu, select **Rename Other Project**. This command opens a dialog box that allows you to rename the Other Project. If you choose to rename the project, remember that changing the project name may affect one or more of the configurations that recognize the Other Project.
3. A warning message (Figure 6.24) appears when you save the new name, asking you to confirm that you want to rename the project.

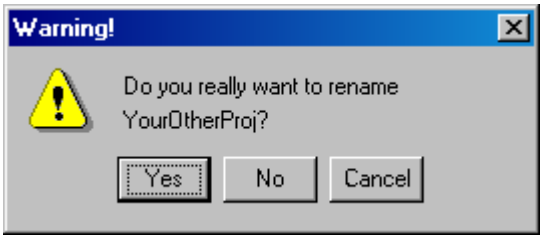

Figure 6.24 Warning Message when Renaming "Other" Project

6.6.3 Removing "Other" Projects from a Configuration

To remove an "Other" Project from the current Configuration:

1. Select the **Other Project Tool** and right-click on the Other Project.
2. From the shortcut menu, select **Remove from Configuration**. This command removes the Other Project from the Configuration that is currently displayed in the Configuration box on the toolbar. The **Confirm Removal** dialog box appears.

You can also remove an Other Project from a Configuration by accessing the **Configuration Editor** and manually removing it from the **Projects** tab using the **Project Selector**.

6.6.4 Deleting "Other" Projects

To delete an "Other" Project from the watershed:

1. Select the **Other Project Tool** and right-click on the Other Project.
2. From the shortcut menu, select **Delete Other Project**. This command removes the Other Project and all data associated with it from the watershed. You will be asked to confirm a deletion before the Other Project is removed. Again, if you choose to delete the Other Project, remember that deleting it may affect one or more of the configurations that recognize the Other Project.

6.6.5 Adding Configuration Notes for "Other" Projects

To add Configuration Notes for an "Other" Project:

1. Select the **Other Project Tool** and right-click on the Other Project.
2. From the shortcut menu, select **Configuration Notes**. This command opens a dialog box (Figure 6.25) for entering text information about an Other Project that is specific to the configuration.

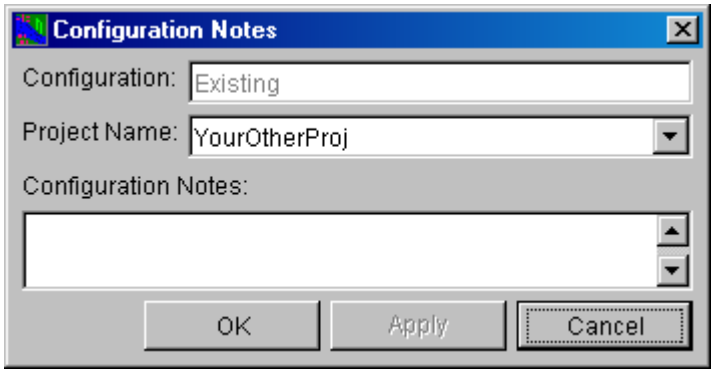

Figure 6.25 Configuration Notes - "Other" Projects

6.7 Configuring Project Display Properties

You can configure the appearance of Reservoirs, Levees, Diversions, and Computation Points in the **Study Layer** of your watershed using the **Study Properties Editor**. See Chapter 4, Section 4.4.1, "Study Layer Properties" for information on how to change Project display properties.

6.8 Defining Computation Points

The Computation Point set contains all locations where time-series information is to be computed. ResSim automatically generates Computation Points for the watershed based on Project, Stream Alignment, and Impact Area placement.

To add a Computation Point:

1. Lock the configuration.
2. Select the **Computation Point Tool**.
3. Hold down the **CTRL** key and click in the desired location.

The new Computation Point will appear in the map display. By default, Computation Points snap to the stream alignment. If you prefer that the Computation Point not snap to the stream alignment, de-select the **Snap to Stream Alignment** check box in the Computation Point Editor, described below.

6.8.1 Editing Computation Point Data

Use the **Computation Point Editor** to edit a Computation Point:

1. Lock the configuration.
2. Select the **Computation Point Tool**.
3. Right-click on the Computation Point to access the shortcut menu.
4. Select **Edit Computation Point**. The **Computation Point Editor** (Figure 6.26) will appear.

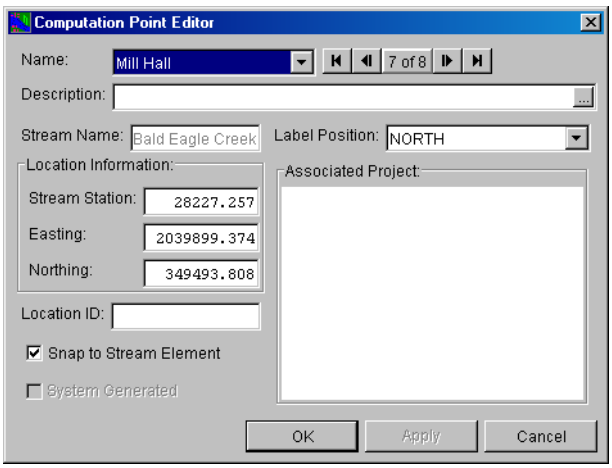

Figure 6.26 Computation Point Editor

The **Computation Point Editor** displays the information associated with a Computation Point and allows you to edit its location information.

Computation Point Name:
The Computation Point Editor displays the name of the Computation Point you have selected (in the list along with all available Computation Points in the watershed). Also, left and right arrows (navigator buttons) allow you to click through the Computation Points in the watershed.

Description:
To edit the Description of the Computation Point, you can type into the text area or click the  button to access the **Enter Description** dialog box.

Location ID:
Optionally, you can enter a Location ID to reference the Computation Point to a ResSim ID.

Stream Name:
The stream name automatically appears in the Stream Name box. In the case of a Computation Point situated at a confluence of two streams, you need to verify that the Computation Point resides on the appropriate stream.

Stream Station:
The Stream Station field displays the location of the computation point along the stream element.

Label Position: ResSim automatically positions the text label for a Computation Point where it is least likely to overlap other labels. However, you can move the position of the layer by selecting a position from the Label Position list.

Location:
ResSim automatically fills in the coordinate information for Northing/Easting. You may type in new coordinates to relocate the Computation Point on the map display.

Snap to Stream Alignment:
By selecting the Snap to Stream Alignment check box, you can place a Computation Point at any location and it will snap to the alignment. After a Computation Point is snapped on the stream alignment, only the Stream Station can be edited. ResSim automatically displays the Stream Name and Stream Stationing and Coordinates.

System Generated:
ResSim automatically generates Computation Points for the watershed based on Project, Stream Alignment, and Impact Area placement. The System Generated checkbox is selected if the Computation Point has been system generated.

6.8.2 Renaming a Computation Point and Editing the Description

To rename a Computation Point or edit its description:

1. Lock the configuration.
2. Select the **Computation Point Tool** and right-click on the Computation Point.
3. Select **Rename Computation Point**.
4. Use the **Rename** dialog box (Figure 6.27) to edit the name and description. Click the ... button to access the **Enter Description** dialog box for longer descriptions.

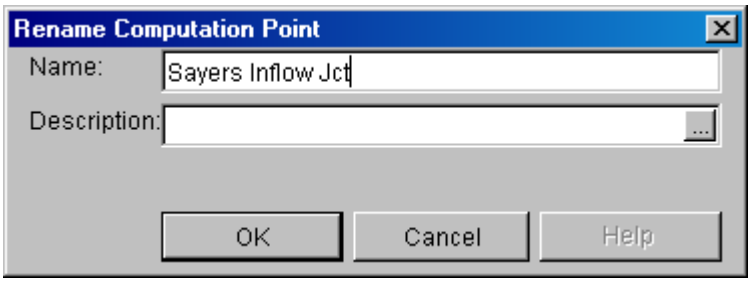

Figure 6.27 Rename Dialog Box - Computation Point

6.8.3 Deleting a Computation Point

To delete a Computation Point:

1. Lock the configuration.
2. Select the **Computation Point Tool** and right-click on the Computation Point.
3. Select **Delete Computation Point** from the shortcut menu. The **Confirm Deletion** dialog box will appear (Figure 6.28).
4. Click **Yes** to confirm the deletion.

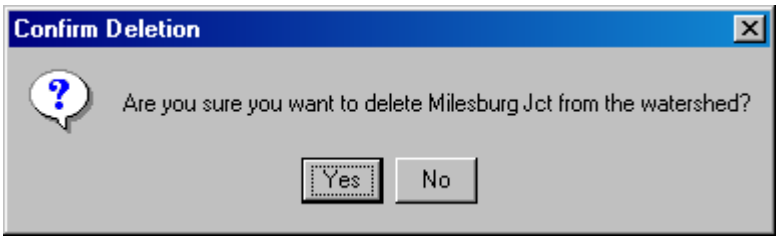

Figure 6.28 Confirm Deletion Dialog Box - Computation Point

6.9 Working with Time-Series Icons

Time-Series Icons are not necessary for ResSim simulations. However, as part of watershed setup, you may need to configure them for other applications in the modeling software suite.

You can use **Time-Series Icons** to represent the locations of gages or Time-Series locations. Typically used in CWMS, they can be linked to data from either the Oracle Database or from a DSS file. The complete inventory of Time-Series Icons is viewable in the Watershed Setup Module. Figure 6.29 shows examples of the icons you can configure in the **Watershed Setup Module**.

Figure 6.29 Time-Series Icons

Refer to the *CWMS User's Manual* (HEC, 2003a) for additional information about Time-Series Icons.